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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Juergen Breitenbacher

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EXAMINER

NGUYEN, XUAN LAN T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,599	Applicant(s) BREITENBACHER ET AL.	
	Examiner Lan Nguyen	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14 and 16-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14 and 16-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14 and 16-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (USP 5388896) in view of Schubert (USP 6030055).

Re: claim 14, Hartmann shows a method for braking two wheels of a vehicle, as in the present invention, comprising: linking a first value of a first brake pressure in a first wheel-brake cylinder allocated to a first wheel 50 of the two wheels with a second value of a second brake pressure in a second wheel-brake cylinder allocated to a second wheel 50 of the two wheels, wherein the linking is given on the basis of hydraulic pressures at respective intake valves including a first intake valve 5a and a second intake valve 5b, as stated in the Abstract wherein the pressures of the two valves are employed in the controlling method. Hartman further discusses the relationship between controlling the pressures of the valves in column 4, lines 40-59. Hartman discusses controlling the pressures of the front brakes from right to left in the Abstract. In the body of the patent, Hartman further discusses the controlling of the pressure of the rear in comparison to the front. In other words, the valves are being

adjusted in relationship with one another or the second pressure is adjusted according to a first pressure in the same manner as Applicant. All of these adjusted pressures are desirable because they are adjusted to provide stability to the vehicle on a slip road. Hartmann lacks the concept of employing a differential pressure in the first intake valve and in the second intake valve in the controlling method. Schubert teaches the concept of employing a differential pressure in an intake valve in a control method instead of using pressure values in order to increase accuracy in a pressure controlling method in column 1, lines 47-end. Schubert further shows the characteristics curves in figures 6a and 6b, for differential pressure in relationship with current in order to determine the current from the differential pressure and vice versa. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Hartmann's method to employ the differential pressure of an intake valve in a controlling method as taught by Schubert instead of using pressure values in order to increase accuracy in a pressure controlling method. As modified, Hartmann's method would be employing characteristic curves as taught by Schubert for the first and the second intake valves in order to increase accuracy in the controlling method in the same manner for both valves. As such, the current of each valve can be determined from the characteristics curves as shown by Schubert. Schubert also shows in column 1, lines 47-54 that the currents are activation currents for outputting signals to generate pressures as shown in figure 3.

Re: claims 16-19, Schubert further teaches the concept of using characteristic curves of differential pressure versus current in controlling the intake valve in figures 6a

and 6b. As modified by Schubert, Hartmann's method would be employing characteristic curves as taught by Schubert for the first and the second intake valves in order to increase accuracy in the controlling method.

Re: claim 20, Hartmann further teaches the concept of setting a limit in the difference between the pressures of the intake valves 5a, 5b in the Abstract, lines 4-7.

Re: claim 21, Hartmann teaches the step of the linking indicates a difference between the first pressure and the second pressure. As modified by Schubert, Hartmann's method would comprise the step of indicating a difference between the first pressure differential and the second pressure differential.

Re: claims 22 and 23, Hartmann further teaches the concept of taking into consideration the vehicle speed and transverse acceleration in the controlling scheme in controlling the two wheels 5a and 5b which belong to the same axle as stated in the Abstract.

Re: claims 28 and 41-46, Schubert teaches all the combinations of the pressures versus the currents in the characteristic curves as shown in figures 6a and 6b.

Re: claim 24, Hartman shows a device for braking two wheels of a vehicle, as in the present invention, comprising: a logic arrangement for linking a first value of a first brake pressure in a first wheel-brake cylinder allocated to a first wheel 50 of the two wheels with a second value of a second brake pressure in a second wheel-brake cylinder allocated to a second wheel 50 of the two wheels, wherein the linking is given on the basis of hydraulic pressures at respective intake valves including a first intake valve 5a and a second intake valve 5b, as stated in the Abstract wherein the pressures

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of the two valves are employed in the controlling device. Hartman further discusses the relationship between controlling the pressures of the valves in column 4, lines 40-59.

Hartman discusses controlling the pressures of the front brakes from right to left in the Abstract. In the body of the patent, Hartman further discusses the controlling of the pressure of the rear in comparison to the front. In other words, the valves are being adjusted in relationship with one another or the second pressure is adjusted according to a first pressure in the same manner as Applicant. All of these adjusted pressures are desirable because they are adjusted to provide stability to the vehicle on a slip road.

Hartmann lacks the concept of employing a differential pressure in the first intake valve and in the second intake valve in the controlling device. Schubert teaches the concept of employing a differential pressure in an intake valve in a controlling device instead of using pressure values in order to increase accuracy in a pressure controlling method in column 1, lines 47-end. Schubert further shows the characteristics curves in figures 6a and 6b, for differential pressure in relationship with current in order to determine the current from the differential pressure and vice versa. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified

Hartmann's device to employ the differential pressure of an intake valve in a controlling device as taught by Schubert instead of using pressure values in order to increase accuracy in a pressure controlling method. As modified, Hartmann's device would be employing characteristic curves as taught by Schubert for the first and the second intake valves in order to increase accuracy in the controlling method in the same manner for both valves. As such, the current of each valve can be determined from the

characteristics curves as shown by Schubert. Schubert also shows in column 1, lines 47-54 that the currents are activation currents for outputting signals to generate pressures as shown in figure 3.

Re: claims 25 and 26, Schubert further shows that the intake valve is a differential-pressure regulating valve and that the valve is control by a characteristic curve of differential pressure versus current. As modified by Schubert, Hartmann's device would comprise first and second the intake valves to be differential-pressure regulating valves and that the valves would be controlled by characteristic curves of differential pressure versus current as taught by Schubert in figures 6a and 6b in order to improve accuracy.

Re: claims 27 and 29-40, Schubert teaches all the combinations of the pressures versus the currents in the characteristic curves as shown in figures 6a and 6b. Hartman shows that the valves are solenoid valves wherein the valves are activated to control a yawing moment in the Abstract and the wheels 50, 50 (with valves 5a, 5b) are in the same axle as shown in figure 1 of Hartman.

Response to Arguments

3. Applicant's arguments filed 5/4/09 have been fully considered but they are not persuasive.

- Applicant argues that Hartman does not show the claimed feature of "determining a desired second pressure". Applicant also re-produces the cited passage from column 4, lines 40-55 of Hartman to show that there is no determination for a

desired second pressure in the cited passage. The last four lines of the cited passage clearly show that a desired second pressure is determined: "one of the valves 5a or 5b or 6a or 6b allocated to the wheels 50 is triggered to prevent a further build up of pressure on the corresponding wheel having the higher pressure." Moreover, lines 56-59 of column 4 also reads "Block 4 is informed by way of a terminal 7 when there is a sharp deceleration of a front wheel (i.e. when -a becomes large). In such a case, the comparison value delta PSH for the rear axle is set to a small value." Hartman discusses controlling the pressures of the front brakes from right to left in the Abstract. In the body of the patent, Hartman further discusses the controlling of the pressure of the rear in comparison to the front. In other words, the valves are being adjusted in relationship with one another or the second pressure is adjusted according to a first pressure in the same manner as Applicant. All of these adjusted pressures are desirable because they are adjusted to provide stability to the vehicle on a slip road. In conclusion, Hartman teaches the inter-relationship in controlling the pressures of the valves depending on each other. Hartman lacks the concept of employing a differential pressure in the control method. Schubert teaches the concept for using pressure differential in controlling a valve in order to increase accuracy. The combination of Hartman in view of Schubert is deemed proper and is repeated above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is (571) 272-7121. The examiner can normally be reached on Monday through Friday, 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xuan Lan Nguyen/
Primary Examiner
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